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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,856	08/23/2002	John Bruno	00100.02.0038 (020038T)	4595

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EXAMINER

HA, NATHAN W

ART UNIT PAPER NUMBER

2814

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,856

Applicant(s)

BRUNO, JOHN

Examiner

Nathan W. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/02.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in Paper No. 11/03 is acknowledged. The traversal is on the ground(s) that there is no specific limitation in claim 17 that prohibits claim 17 from expressly encompassing the Examiner's example. This is not found persuasive because the method of making the circuit may be formed by another method, for example, the process of coupling system memory and a north bridge can carry out at the same time. Furthermore, as mentioned previously, this method is classified in another class, which is different than the class of Group I, Claims 1-16.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 3-4, 9-12, and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Jeddeloh, US 6,346,946.

In regard to claims 1, 3, 10 and 12, in fig. 2, Jeddeloh discloses an IC comprising:

a standard dimension substrate, for example, the substrate of the north bridge;

an information router 102, for example; and
system memory 126 integrated on the substrate and in electrical communication with the router via at least one of a plurality of electrical leads associated with the substrate, wherein system instructions may be stored and retrieved from the system memory through the router.

In regard to claim 2 the router is disposed within an application specific die; see fig. 2.

In regard to claim 4, Jeddeloh further discloses the graphics memory is on the substrate and electrically communicate with the graphics controller 140; see fig. 2.

In regard to claims 9 and 16, see fig. 2.

In regard to claim 11, wherein the die further includes a graphics controller 140 in conjunction with the north bridge; see fig. 2.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-8 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeddeloh as applied to claims 1, 3-4, 9-12, and 16 above, and further in view of Barrett, US 2003/0183934.

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In regard to claims 5-8 and 13-15, Jeddeloh discloses all of the claimed limitation as mentioned above except the die coupled to the bottom using wire bonds and flip chip technology.

It should be noted that the wire bonds and flip chip technology are widely used in the art of semiconductor packaging since they provide an impact package, therefore, increase the surface area of the package. For instance, Barrett discloses an analogous package includes semiconductor dies, substrate, and all of the circuits are formed on the substrate, for example, Graphics accelerator 520, memory 540, processor 510. The package is put together by using wire bonds and flip chip technology in order to reduce the package size and cost when more than one die is needed; see [0010].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the flip-chip technology as taught by Barrett in order to reduce the package size and cost when more than one die is needed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

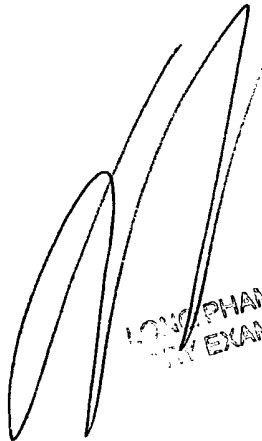
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Nathan Ha
January 19, 2004



LONG PHAM
EXAMINER